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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,132	12/10/2003	Richard M. Ehrlich	PANAP-01081US0	7396

23910 7590 10/06/2005

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EXAMINER

NEGRON, DANIEL L

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/733,132

Applicant(s)

EHRlich, RICHARD M.

Examiner

Daniell L. Negrón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-12, 15-18, 21-25, 28-31, 34-38, 41-45, and 48-52 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 13, 14, 19, 20, 26, 27, 32, 33, 39, 40, 46, 47, 53 and 54 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 03/11/05.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on March 11, 2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-5, and 34-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Moran et al U.S. Patent No. 6,738,205.

Regarding claims 1 and 4, Moran et al disclose a template pattern for a reference surface of a disk (14) connected with a hard disk drive (24) having at least one head (34, 36) connected with a rotary actuator (28), comprising at least one servo wedge (i.e., arc) having a first end at an

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inner diameter of the disk and a second end at an outer diameter of the disk (see Fig. 3), at least one servo wedge (11) including: a plurality of pulses (50) extending along a stroke from the first end to the second end; a plurality of zig-bursts (51, 52), each zig-burst forming a variable angle relative to the plurality of pulses (column 12, lines 35-37), and a plurality of zag-bursts (51, 52), each zag-burst forming a negative chevron angle relative to the plurality of pulses. It is considered that each zag-burst is oriented at a negative angle with respect to its corresponding zig-burst (see Fig. 9).

Moran et al further disclose a template pattern wherein the variable angle at the second end is a chevron angle and the variable angle at the first end is less than the chevron angle (column 12, lines 35-40). Moran et al show that the chevron angle can vary by increasing continuously, having an increased angle of separation towards the outer diameter of the disk.

Furthermore, it is considered that each zig-burst and zag-burst can have either a negative or positive chevron angle with respect to the plurality of pulses depending on whether the angle is taken from a clockwise or counter-clockwise direction with respect to the plane parallel to the plurality of pulses.

Regarding claim 2, Moran et al disclose a template pattern wherein the plurality of pulses (50) trace an arc (11) from the first end to the second end such that the arc follows the motion of the head (see Fig. 3 and disclosure thereof).

Regarding claim 3, Moran et al disclose a template pattern wherein each pulse (50) can be continuous (i.e., radial) or discontinuous (column 8, lines 30-34).

Regarding claim 5, Moran et al disclose a template pattern wherein the variable angle abruptly changes from less than the chevron angle to the chevron angle (column 12, lines 36-37).

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Regarding claims 34-38, claims have limitations similar to those treated in the above rejections, and are met by the reference as discussed above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-12, 15-18, 21-25, 28-31, 41-45, and 48-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moran et al U.S. Patent No. 6,738,205.

Regarding claims 8 and 11, Moran et al disclose a template pattern for a reference surface of a disk (14) connected with a hard disk drive (24) having at least one head (34, 36) connected with a rotary actuator (28), comprising at least one servo wedge (i.e., arc) having a first end at an inner diameter of the disk and a second end at an outer diameter of the disk (see Fig. 3), at least one servo wedge (11) including: a plurality of pulses (50) extending along a stroke from the first end to the second end; a plurality of zig-bursts (51, 52), each zig-burst forming a variable angle relative to the plurality of pulses (column 12, lines 35-37), and a plurality of zag-bursts (51, 52), each zag-burst forming a negative chevron angle relative to the plurality of pulses. It is considered that each zag-burst is oriented at an negative angle with respect to its corresponding zig-burst (see Fig. 9).

Moran et al fail to explicitly show a template pattern wherein the variable angle at the first end is a zero and the variable angle at the second end is a chevron angle. However, Moran et al show that the chevron angle can vary by increasing continuously, having an increased angle

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of separation towards the outer diameter of the disk. Moran et al discloses that an angle may vary within a range of 20 degrees to 40 degrees from a first end to a second end. It is considered that making the angle of the first end equal to zero would merely be changing the range disclosed by Moran et al and holds no patentable weight because it is not inventive to discover the optimum or workable ranges by routine experimentation (see *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955)).

Regarding claim 9, Moran et al disclose a template pattern wherein the plurality of pulses (50) trace an arc (11) from the first end to the second end such that the arc follows the motion of the head (see Fig. 3 and disclosure thereof).

Regarding claim 10, Moran et al disclose a template pattern wherein each pulse (50) can be continuous (i.e., radial) or discontinuous (column 8, lines 30-34).

Regarding claim 12, Moran et al disclose a template pattern wherein the variable angle abruptly changes from less than the chevron angle to the chevron angle (column 12, lines 36-37).

Regarding claims 15-18, 21-25, 28-31, 41-45, and 48-52, claims have limitations similar to those treated in the above rejections, and are met by the reference as discussed above.

Allowable Subject Matter

6. Claims 6, 7, 13, 14, 19, 20, 26, 27, 32, 33, 39, 40, 46, 47, 53, and 54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559.

The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN 
September 30, 2005


DAVID HUDSPETH
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